

AMENDMENT TO CLAIMS

In the Claims

Please **AMEND** claims 1, 10, 16, 24 and 25; and

Please **ADD** new claim 26 as follows; and

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method for manufacturing an integrated circuit comprising a plurality of semiconductor devices including an n-type transistor and a p-type transistor on a semiconductor wafer, the method comprising:

covering the p-type transistor with a mask;

oxidizing a portion of a the gate polysilicon of the n-type transistor, such that tensile mechanical stresses are formed within a channel of the n-type transistor; and

removing, after the oxidizing step, oxide formed during the oxidizing step from above the gate polysilicon of the n-type transistor,

wherein the oxidizing step results in formation of a bird's beak in an edge of the gate polysilicon between the gate polysilicon and a spacer of the n-type transistor and the removing step preserves the bird's beak.

2. (Original) The method of claim 1, wherein the step of covering comprises covering the p-type transistor with a mask made of nitride.

3. (Original) The method of claim 1, wherein the step of oxidation is performed using low temperature oxidation.

4. (Original) The method of claim 1, wherein the step of oxidation is performed using at least one of high pressure oxidation or atomic oxidation or plasma oxidation.

5. (Original) The method of claim 1, wherein the step of oxidation is performed between a temperature of about 25°C to about 600°C.

6. (Original) The method of claim 1, further comprising forming a planarized oxide layer on the semiconductor wafer.

7. (Original) The method of claim 6, further comprising removing silicide material from above the gate polysilicon of the n-type field effect transistor.

8. (Original) The method of claim 7, wherein the step of removing silicide material from above the gate polysilicon of the n-type field effect transistor comprises etching the silicide material from above the gate polysilicon of the n-type field effect transistor.

9. (Previously Presented) The method of claim 1, wherein the removing step comprises removing a deposited oxide from above the gate polysilicon of the n-type

field effect transistor by etching the deposited oxide from above the gate polysilicon of the n-type field effect transistor.

10. (Currently Amended) ~~The method of claim 9, further comprising~~ A method for manufacturing an integrated circuit comprising a plurality of semiconductor devices including an n-type transistor and a p-type transistor on a semiconductor wafer, the method comprising:

covering the p-type transistor with a mask;

oxidizing a portion of a gate polysilicon of the n-type transistor, such that tensile mechanical stresses are formed within a channel of the n-type transistor, wherein the oxidizing results in formation of a bird's beak in an edge of the gate polysilicon;

removing, after the oxidizing step, oxide above the gate polysilicon of the n-type transistor, the removing step comprising removing a deposited oxide from above the gate polysilicon of the n-type field effect transistor by etching the deposited oxide from above the gate polysilicon of the n-type field effect transistor; and

depositing silicide material on at least the portion of the gate polysilicon of the n-type field effect transistor.

11. (Previously presented) The method of claim 10, wherein the step of depositing silicide forming material on at least the portion of the gate polysilicon of the n-type field effect transistor comprises depositing at least one of Co, Hf, Mo, Ni, Pd₂, Pt, Ta, Ti, W, and Zr.

12. (Original) The method of claim 10, further comprising removing the mask used to cover the p-type field effect transistor.

13. (Original) The method of claim 1, further comprising depositing at least one of a silicide material or a nitride cap on at least the gate polysilicon of the n-type field effect transistor and removing silicide material or the nitride cap from above the gate polysilicon of the n-type field effect transistor prior to performing the step of oxidizing.

14. (Original) The method of claim 1, wherein the step of oxidizing comprises oxidizing the gate polysilicon of the n-type field effect transistor to create a stress of about 700MPa in a channel of the n-type field effect transistor.

15. (Original) The method of claim 1, wherein the step of oxidizing comprises oxidizing the gate polysilicon of the n-type field effect transistor to create tensile mechanical stresses are about 500Pa to about 1000Pa.

16. (Currently Amended) A method for manufacturing an integrated circuit comprising a plurality of semiconductor devices including an n-type field effect transistor and a p-type field effect transistor on a semiconductor wafer, the method comprising forming oxide between a side of a gate polysilicon and a spacer of the n-type field effect transistor, oxidizing a portion of a the gate polysilicon of the n-type field effect transistor, such that tensile mechanical stresses are formed within a channel of the n-type field effect transistor, without creating additional tensile stresses in a channel of the p-type

field effect transistor, and removing oxide formed during the oxidizing step from above the gate polysilicon of the n-type field effect transistor, wherein the oxidizing step results in formation of a bird's beak ~~within the channel of the n-type field effect transistor~~ in an edge of the gate polysilicon between the gate polysilicon and the spacer and the removing step preserves the bird's beak.

Claims 17-20 (Cancelled).

21. (Previously Presented). The method of claim 1, wherein the step of oxidizing a portion of a gate polysilicon of the n-type transistor is performed after silicidation of the gate polysilicon.

22. (Previously Presented) The method of claim 1, wherein the tensile stresses are formed along a longitudinal direction of the channel of the n-type transistor.

Claim 23 (Canceled).

24. (Currently Amended) A method for manufacturing an integrated circuit comprising a plurality of semiconductor devices including an n-type transistor and a p-type transistor on a semiconductor wafer, the method comprising:

forming a first oxide above a gate polysilicon and between a side of the gate polysilicon and a spacer of the n-type transistor,

masking the p-type transistor;

removing the first oxide from above the gate polysilicon of the n-type transistor while allowing the first oxide to remain between the side of the gate polysilicon and the spacer,

~~depositing oxide on the gate polysilicon of the n-type transistor;~~

oxidizing a portion of a the gate polysilicon of the n-type transistor, such that tensile mechanical stresses are formed within a channel of the n-type transistor; and

removing the oxide formed during the oxidizing from above the gate polysilicon of the n-type transistor,

wherein ~~the oxidizing step results in formation of~~ , after the removing of the oxide formed during the oxidizing, a bird's beak remains in the ~~channel of the~~ gate polysilicon between the gate polysilicon and the spacer of the n-type transistor.

25. (Currently Amended) The method of claim 24, wherein the oxidizing step forms the bird's beak and the removing step preserves the bird's beak.

26. (New) The method of claim 1, further comprising forming oxide between a side of the gate polysilicon and the spacer of the n-type transistor.